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UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT GENETICS AND GERMPLASM INSTITUTE

GERMPLASM RESOURCES INFORMATION NETWORK  
(GRIN)

GRIN DATABASE DICTIONARY

1 February 1986

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## ACRONYMS

ARS

Agricultural Research Service, (USDA)

CAC

Crop Advisory Committee

DBMS

DataBase Management System

DBMU

DataBase Management Unit, Beltsville, MD

FORTRAN

FORMula TRANslation, a computer programming language standardized in 1966, with additional standards set in 1977. Prime implementation are referred to as FTN and F77, respectively

GRIN

Germplasm Resources Information Network

NPGS

National Plant Germplasm System, USDA, ARS

NSGC

National Small Grain Collection, USDA, ARS

NSSL

National Seed Storage Laboratory, Fort Collins CO, USA

PI

Plant Inventory number (assigned by PIO only)

PIO

Plant Introduction Office, Beltsville, MD

SCS

Soil Conservation Service, USDA

TSS

Taxonomic Support Staff, USDA, ARS

The terms in this dictionary follow the order of the GRIN-2 Schema. An alphabetic listing of the capitalized terms is found in the adjoining index. Other terms are defined at the end of the database dictionary.

## AREA DICTIONARY

### ACCESSION-PIO-AREA

Area for storing accessions originally documented by the PIO and to record any name changes for accessions due to reidentification or nomenclature changes.

### ACCESSION-SITES-AREA

Area for storing accessions not documented originally by the PIO. These accessions will not have a PI number but will have a specific site identification attached to them.

### ACC-ACCESSORIES-AREA

Area of the database for storing accession acquisition (range) information and secondary accession identifiers.

### COOPERATOR-AREA

Area of the database for storing information about individuals or institutes considered as cooperators, suppliers or otherwise involved in the NPGS.

### DESCRIPTORS-AREA

Area of the database for storing definitions of the variables used for descriptor states as well as the definition of the descriptor. This area can be thought of as a dynamic data dictionary for descriptor definitions.

### GERMINATION-RULES-AREA

Area of the database for storing germination rules for seed testing.

### INVENTORY-SITES-AREA

Area of the database for storing supply site inventory information for all collections with the exception of NSSL and the NSGC.

### INVENTORY-NSSL-AREA

Area of the database for storing NSSL inventory information.

### INVENTORY-NSGC-AREA

Area of the database for storing supply site inventory information for the NSGC.

### OBSERVATION-AREA

#### OBS-1-AREA

Area of the database for storing single-descriptor observation records as opposed to multiple-descriptor observation records.

## OBS-2-AREA

Area of the database for storing single-descriptor observation records as opposed to multiple-descriptor observation records. This area is identical with OBS-1-AREA. Its purpose is to create space for additional OBSERVATION-RECORDs.

## OBS-3-AREA

Area of the database for storing single-descriptor observation records as opposed to multiple-descriptor observation records. This area is identical with OBS-1-AREA and OBS-2-AREAs. Its purpose is to create space for additional OBSERVATION-RECORDs.

## COMPOSITE-OBSERVATION-AREA

## COMPOSITE-OBS-1-AREA

Area of the database for storing observation records that contain more than one descriptor as opposed to single-descriptor observation records.

## COMPOSITE-OBS-2-AREA

Area of the database for storing observation records that contain more than one descriptor as opposed to single-descriptor observation records. This area is identical with COMPOSITE-OBS-1-AREA. Its purpose is to create space for additional COMPOSITE-OBS-RECORDs.

## COMPOSITE-OBS-3-AREA

Area of the database for storing observation records that contain more than one descriptor as opposed to single-descriptor observation records. This area is identical with COMPOSITE-OBS-1-AREA and COMPOSITE-OBS-2-AREAs. Its purpose is to create space for additional COMPOSITE-OBS-RECORDs.

## ORDERS-AREA

Area of the database for storing information on germplasm requests or orders to the germplasm collection sites.

## STANDARDS-AREA

Area of the database for storing common names and geographic information.

## STUDY-AREA

Area of the database for storing information on environments where germplasm evaluations were conducted as well as published literature citations and abstracts concerning these evaluations.

## TAXONOMY-AREA

Area of the database containing all taxonomic information.



## ACCESSION-AREA DICTIONARY

## ACCESSION-RECORD

This is the major identification construct in the database. Within the record the ACC-ID-NUMBER and the ACC-ID-PREFIX form a unique identifier used throughout the database to identify each unique accession. Duplicates of this number and prefix are not allowed.

## ACC-ID-PREFIX

Prefix for the unique accession identifier. All accessions documented by PIO have a prefix of 'PI'. Character 4.

## ACC-ID-NUMBER

Numeric part of the unique accession identifier. Integer.

## ACC-CULTIVAR

Name given to those members of a subvarietal group which exhibit a particular growth characteristic (e.g. Essex, Miles, Pixie). May or may not be a registered cultivar name. Character 40.

## ACC-COMMON-NAME

The common name for the accession. This name should match at least one of the common names in the COMMON-NAME-RECORD. Character 30.

## ACC-TAXONOMY-PENDING-FLAG

A flag to indicate whether the accession has been satisfactorily identified or is still in question. If the identification is tentative the codes are 'cf' for compare and 'af' for affinity to. Character 2.

## ACC-RESTRICTED

A flag to indicate whether the accession is designated as poisonous, noxious, or narcotic (codes are: POIS, NOX, or NARC, respectively). Character 4.

## ACC-LIFE-FORM

Life form or growth characteristics of the accession (e.g. annual, biennial, tree, etc.) Character 10.

## ACC-FORM-RECD

The form of the plant material when received by the initial documenting germplasm collection site. (e.g. seeds, tubers, spores, etc.) Character 6.

## ACC-IMPROVEMENT-STATUS

Used to indicate the extent of development of the accession from wild to cultivated. Character 10.

## ACC-PRIMARY-SUPPLY-SITE

The principle germplasm collection site where the accession is to be held or is presently maintained and distributed from.  
Character 6.

ACC-DISTRIBUTION-SAMPLE-PREFIX

The prefix of the inventory sample available for distribution at the germplasm collection site given in ACC-PRIMARY-SUPPLY-SITE.  
Character 4.

ACC-DISTRIBUTION-SAMPLE-NUMBER

A number that identifies the inventory sample available for distribution at the germplasm collection site given in ACC-PRIMARY-SUPPLY-SITE. Integer.

ACC-DISTRIBUTION-SAMPLE-SUFFIX

A suffix of the inventory sample available for distribution from the germplasm collection site given in ACC-PRIMARY-SUPPLY-SITE.  
Character 4.

ACC-DISTRIBUTION-SAMPLE-TYPE

The type inventory sample available for distribution from the germplasm collection site given in ACC-PRIMARY-SUPPLY-SITE.  
Character 2.

ACC-INV-AVAILABLE-FLAG

A field (flag) indicating whether inventory information is loaded in the database for the accession. Will be YES or the reason why not. Software supplied.

ACC-OBS-AVAILABLE-FLAG

A field (flag) indicating whether observation information is loaded in the database for the accession. Indicates whether it is in single-observations, composite-observations or both types of observation records. Software supplied.

ACC-YEAR-SITE-RECD

Year that the germplasm collection site received the accession.  
Character 4.

ACC-MONTH-SITE-RECD

Month that the germplasm collection site received the accession.  
Character 2.

ACC-DAY-SITE-RECD

Day that the germplasm collection site received the accession.  
Character 2.

ACC-YEAR-RELEASED

Year the accession was made available to the public. Character 4.

ACC-MONTH-RELEASED

The month the accession was made available to the public.  
Character 2.

#### ACC-DAY-RELEASED

The day the accession was made available to the public. Character 2.

#### ACC-SENT-TO-NSSL

Flag to indicate that the accession has been sent to NSSL for base storage. Character 2.

#### ACC-YEAR-COLLECTED

Year that the accession was collected from its native habitat.  
Character 4.

#### ACC-MONTH-COLLECTED

Month that the accession was collected from its native habitat.  
Character 2.

#### ACC-DAY-COLLECTED

Day that the accession was collected from its native habitat.  
Character 2.

#### ACC-QUANTITY-RECD

Indicates the quantity and units of the accession received.  
Character 10.

#### ACC-INSTITUTE-OF-ORIGIN

Name of the institute within the ACC-COUNTRY-OF-ORIGIN from which the accession originated or where it was developed (if a cultivar). This field should not be used if the accession was collected in the wild. Character 40.

#### ACC-STATE-OF-ORIGIN

State name in which the accession was originally collected from its native habitat or the state of the institute where the cultivar was originally developed (for a cultivar, the ACC-INSTITUTE-OF-ORIGIN should be given). Character 20.

#### ACC-COUNTRY-OF-ORIGIN

Country name from which the accession was originally collected from its native habitat or the country of the institute where the cultivar was originally developed (for a cultivar, the ACC-INSTITUTE-OF-ORIGIN should be given). Character 26.

#### ACC-LAT-DEG

The latitude degrees where the accession was collected. The value range is 00-90. Character 2.

#### ACC-LAT-MIN

The latitude minutes where the accession was collected. The value



range is 00-59. Character 2.

#### ACC-LAT-HEMI

The hemisphere (North or South of 0 latitude) where the accession was collected. The software will accept an N, S, or a blank. Character 2.

#### ACC-LONG-DEG

The longitude degrees where the accession was collected. The value range is 00-180. Character 4.

#### ACC-LONG-MIN

The longitude minutes where the accession was collected. The value range is 00-59. Character 2.

#### ACC-LONG-HEMI

The longitude hemisphere (East or West of Greenwich) where the accession was collected. The software will accept E, W, or a blank. Character 2.

#### ACC-ELEVATION-LOW

The lowest elevation (in meters) where the accession was collected. If only one elevation is given on collection records, it is recorded here, with ACC-ELEVATION-HIGH left blank. Character 6.

#### ACC-ELEVATION-HIGH

The highest elevation (in meters) where the accession was collected. If only one elevation is given on collection records, this elevation is recorded in the ACC-ELEVATION-LOW field. Character 6.

#### ACC-UPD-SITE

Germplasm collection site of the individual who entered or last updated the ACCESSION-RECORD. Software supplied.

#### ACC-UPD-LOGON

Login ID of the individual who entered or last updated the ACCESSION-RECORD. Software supplied.

#### ACC-YEAR-UPD

Year the ACCESSION-RECORD was entered or last updated. Software supplied.

#### ACC-MONTH-UPD

Month the ACCESSION-RECORD was entered or last updated. Software supplied.

#### ACC-DAY-UPD

Day the ACCESSION-RECORD was entered or last updated. Software supplied.

## ACC-LINES-OF-PEDIGREE

The number of 60 character lines of data for describing the pedigree of the accession. Software supplied.

## ACC-LINES-OF-LOCAL-NAMES

The number of 60 character lines required for local names of the accession. Software supplied.

## ACC-LINES-OF-LOC-HAB

The number of 60 character lines of text describing the locality and habitat (physical line attributes) in which the accession was found. Software supplied.

## ACC-LINES-OF-NARRATIVE

The number of 60 character lines of text narrative for describing the accession. Software supplied.

## ACC-ADDRESS1-OF-ORIGIN

First line of the mailing address of the institute of origin of the accession. The address here is intended to give a more detailed location of the origin of the accession than just the country and state names. Character 60.

## ACC-ADDRESS2-OF-ORIGIN

Second line of the mailing address of the institute of origin of the accession. This reasoning follows that given in ACC-ADDRESS1-OF-ORIGIN. Character 60.

## ACC-CITY-OF-ORIGIN

City name of the place of origin of the accession. This reasoning follows that given in ACC-ADDRESS1-OF-ORIGIN. Character 60.

## ACC-ZIP-OF-ORIGIN

Zip code of the address of origin of the accession. This reasoning follows that given in ACC-ADDRESS1-OF-ORIGIN.

## ACC-CULTIVAR-NAME-SOURCE

The source of the name given in ACC-CULTIVAR. Character 30.

## ACC-PEDIGREE

This field will be repeated the ACC-LINES-OF-PEDIGREE times. The record of the parentage of the accession. Character 60.

## ACC-LOCAL-NAMES

The field below will be repeated the ACC-LINES-OF-LOCAL-NAMES times. The local name of the accession where it was collected. NOT a cultivar name. Character 60.

## ACC-LOCALITY-HABITAT

This field will be repeated ACC-LINES-OF-LOC-HAB times. A general text used to identify the area where the accession was found (e.g.

5km E. of Pittsburg). Character 60.

#### ACC-NARRATIVE

Each field below will occur the ACC-LINES-OF-NARRATIVE times.

##### ACC-NARRATIVE-LABEL

A label or abbreviation that can be used to designate a consistent entry into the narrative field. Character 10.

##### ACC-NARRATIVE-LINE

This is used to specify traits, conditions, descriptions, and any other information not stored elsewhere including soil conditions, horticultural traits, special uses, etc. Character 60.

#### PREVIOUS-NAMES-RECORD

This record stores information concerning the details of accession name changes that occur due to a reidentification of an accession or a recognized change in the taxonomic name previously assigned.

##### PN-TYPE

A field designating the reason for the taxonomic name change (i.e. initial incorrect identification or a recognized taxonomic name change). Character 10.

##### PN-UPD-SITE

Germplasm collection site affiliation of the individual that entered or last updated the PREVIOUS-NAMES-RECORD. Software supplied.

##### PN-YEAR-UPD

Year that the PREVIOUS-NAMES-RECORD was entered or last updated. Software supplied.

##### PN-MONTH-UPD

Month that the PREVIOUS-NAMES-RECORD was entered or last updated. Software supplied.

##### PN-DAY-UPD

Day that the PREVIOUS-NAMES-RECORD was entered or last updated. Software supplied.

##### PN-NOMEN-NUMBER

The nomenclature code number of the taxonomic name before it was changed. Integer.

##### PN-LINES-OF-PREVIOUS-NAME

Number of lines that previous names occupy for a given accession. Software supplied.

##### PN-REQUESTOR



The name of the individual asking for the accession scientific name change or reidentification. Character 60.

PN-AUTHORITY

Individual responsible for approving the requested scientific name change. Character 60.

PN-PREVIOUS-NAME

The complete, previous name of the accession. This field occurs PN-LINES-OF-PREVIOUS-NAME times. Character 60.

## ACC-ACCESSORIES-AREA DICTIONARY

## RANGE-RECORD

A record that stores information in the database concerning a given group of accessions. These groups were usually received by the initial documenting plant introduction station at one time, and consist of a single taxonomic grouping that were assigned a group of contiguous accession primary identification numbers. The donor information will remain constant for a given range.

## R-ID-PREFIX

A prefix given to the entire range upon creation. Basically for identification purposes. Character 4.

## R-LOW-ID-NUMBER

The lowest identification number for the range. Together with the R-ID-PREFIX, a unique low identification number for the range is created. Integer.

## R-HIGH-ID-NUMBER

The highest identification number for the range. Together with the R-ID-PREFIX, a unique high identification number for the range is created. Integer.

## R-NUMBER-OF-ACCESSIONS

The number of accessions in the range. Integer.

## R-NOMEN-NUMBER

This field gives the code for the species nomenclature of the range at the time of introduction. Integer.

## R-COMMON-NAME

This field gives the common name assigned to the range at the time of introduction. Character 30.

## R-CROP-CATEGORY

A general category assigned by documenting introduction station describing the general category to which the crop belongs (e.g. cereal, vegetable, fruit, etc.). Character 8.

## R-INSTITUTE-OF-ACQ

The name of the organization from which the range of accessions was acquired. Character 40.

## R-STATE-OF-ACQ

The name of the state or province from which the range of accessions was acquired. Character 20.

## R-COUNTRY-OF-ACQ

The country name from which the range of accessions was acquired. Character 26.

## R-YEAR-USA-RECD

The year the United States received the accession range.  
Character 4.

## R-MONTH-USA-RECD

Month that the United States received the range. Character 2.

## R-DAY-USA-RECD

Day that the United States received the range. Character 2.

## R-RESPONSIBLE-SITE

The germplasm collection site responsible for maintaining the information in this RANGE-RECORD. Character 6.

## R-NUMBER-OF-INSTITUTES-OF-ACQ

The number of institutes from which the range was acquired.  
Software supplied.

## R-NUMBER-OF-DESTINATIONS

The number of places that were sent part of the accession range or accession records after documentation. Software supplied.

## R-LINES-OF-NARRATIVE

The number of lines of narrative that describe the range.  
Software supplied.

## R-INSTITUTES-OF-ACQ

The individuals and their institute affiliations from which the accession range was acquired. The following statements are repeated R-NUMBER-OF-INSTITUTES-OF-ACQ times.

## R-IOA-DCB-TYPE

Coded field describing whether the range was acquired from a donor or collector. Character 4.

## R-IOA-INST-LNAME

Individuals last name at the institute from which the range was acquired. Character 30.

## R-IOA-INST-FNMAE

Individuals first name at the institute from which the range was acquired. Character 10.

## R-IOA-INSTITUTE

Name of the organization or institute name from which the range was acquired. Character 40.

## R-IOA-ADDRESS1

First line of the address of the institute from which the range was acquired. Character 40.



## R-IOA-ADDRESS2

Second line of the address of the institute from which the range was acquired. Character 40.

## R-IOA-CITY

City of the institute from which the range was acquired. Character 20.

## R-IOA-STATE

State or province of the institute from which the range was acquired. Character 20.

## R-IOA-COUNTRY

Country of the institute from which the range was acquired. Character 26.

## R-DESTINATIONS

Recipients of the germplasm after initial documentation by the receiving plant introduction station. The following statements occur R-NUMBER-OF-DESTINATIONS times. There are a maximum of 6 R-NUMBER-OF-DESTINATIONS.

## R-DEST-CODE

Code of the recipients site (or SITE-QUERY-NAME) to which the range will be sent after documentation. Character 6.

## R-DEST-WHAT-SENT

Description of shipment of the range to the recipient. This will include either records or samples and records. Character 4.

## R-DEST-LNAME

Last name of the recipient of the range. Character 30.

## R-DEST-FNAME

First name of the recipient of the range. Character 10.

## R-DEST-ORGANIZATION

Organization name as a recipient or organizational affiliation of the DEST-LNAME and DEST-FNAME. Character 40.

## R-DEST-ADDRESS1

First line of the address of the recipient. Character 40.

## R-DEST-ADDRESS2

Second line of the address of the recipient. Character 40.

## R-DEST-CITY

City in which the recipient is located. Character 40.

## R-DEST-STATE

State in which the recipient is located. Character 20.

#### R-DEST-ZIP

Zip code of the address of the recipient. Character 10.

#### RANGE-NARRATIVE

A line of text describing the material in the range. The following statements occur R-LINES-OF-NARRATIVE times. There are a maximum of 6 R-LINES-OF-NARRATIVE.

#### R-NARRATIVE-LABEL

Labels or abbreviations for consistently identifying information found in the narrative. Could be a project title, etc. Character 10.

#### R-NARRATIVE-LINE

The narrative text. Character 60.

#### ACCGROUP-RECORD

A top level record used for grouping accession secondary identifiers into logical units or 'collections'. Groups do not have to be mutually exclusive.

#### AG-NAME

Name given to a particular unit used for grouping particular accessions. Character 20.

#### AG-RESPONSIBLE-UPD-SITE

Site identification of the personnel that grouped the accessions. This also identifies the only site allowed to update this record (that is, for this particular grouping). Software supplied.

#### AG-NARRATIVE

A narrative description of the group characteristics. Character 60.

#### SECONDARY-ID-RECORD

A record used to store information concerning a second accession identifier. This information may be used by a storage site (i.e. NSL, COR numbers) or by PIO for additional collector's numbers or donating institute numbers.

#### SID-ID

Includes any and all secondary (or alternate) identifiers. A primary identifier is described in ACC-ID-PREFIX and ACC-ID-NUMBER. This field is calced using the SID-ID field. An additional SECONDARY-ID-RECORD is created for each secondary identifier known for the accession. Character 30.

#### SID-TYPE

This field indicates the type of identifier used for the SID-ID.

It could be an institute, collectors field number, collection site identifier, country name, etc. Character 4.

SID-RESPONSIBLE-UPD-SITE

The germplasm collection site of the individual entering or last updating the secondary identifier. Software supplied.

SID-SOURCE

The source of the second accession identifier (e.g., collectors's name, institute name, etc.). Character 60.



## COOPERATOR-AREA DICTIONARY

## COOPERATOR-RECORD

This record is the master record for each cooperator in the system. The last name is not a unique key. This means that all individuals having the same last name will be selected when a query is made on the last name. Cooperators are individuals or organizations that are, in one way or another, active or interested in plant germplasm. Germplasm collection sites will be able to update only the records or cooperators which are owned by them, but may read all cooperator information.

## COOP-SITE

The collection site responsible for this record occurrence. Character 6.

## COOP-TYPE

Field to indicate whether the cooperator is an individual or organization. Character 4.

## COOP-ID

A unique phrase given to a particular COOPERATOR-RECORD. This identifier can be used as a code by collection sites and PIO to retrieve a full name and address. Character 6.

## COOP-LOGON

Login ID of the cooperator, if one exists. Character 6.

## COOP-LNAME

Last name of the cooperator. Uppercase for first letter, lowercase for all others. Character 30.

## COOP-FNAME

First name of the cooperator. Uppercase for first letter, lowercase for all others. Character 10.

## COOP-ORGANIZATION

Organization name to which the cooperator belongs. Character 40.

## COOP-ADDRESS1

First line of the cooperator's address. Character 40.

## COOP-ADDRESS2

Second line of the cooperator's address. Character 40.

## COOP-CITY

City for the cooperator's address given in COOP-ADDRESS1 and COOP-ADDRESS2. Character 20.

## COOP-STATE

State or province of cooperator's address given in COOP-ADDRESS1 and COOP-ADDRESS2. Character 20.

## COOP-ZIP

Zip code of the cooperator's address given in COOP-ADDRESS1 and COOP-ADDRESS2. Character 10.

## COOP-COUNTRY

Country of cooperator's address given in COOP-ADDRESS1 and COOP-ADDRESS2. Character 26.

## COOP-PHONE

Complete cooperator's telephone number in the format XXX-XXX-XXXX. Character 12.

## COOP-REGION

The USDA region within the United States in which the cooperator is located. Character 6.

## COOPERATOR-YEAR-UPD

Year the cooperator information was entered or last updated. Software supplied.

## COOP-MONTH-UPD

Month the cooperator information was entered or last updated. Software supplied.

## COOP-DAY-UPD

Day the cooperator information was entered or last updated. Software supplied.

## COOP-COMMENT

A short comment concerning the cooperator record. Character 60.

## COPGROUP-RECORD

This is a top level record keyed on group name. It allows construction of cooperator sets, such as mailing lists. An interest group is a collection of cooperators interested in a specific topic.

## CG-NAME

Name of the interest group, assigned by the manager. Character 20.

## CG-RESPONSIBLE-UPD-SITE

Germplasm collection site of the individual that entered or last updated the COP-GROUP-RECORD and any MEMBERSHIP-RECORDS attached to it. Character 6.

## CG-COMMENT

A short comment describing the cooperator group. Character 60.

## MEMBERSHIP-RECORD

This record provides the 'link' between the COOPERATOR record and the COPGROUP record. There is no unique key; it is retrieved by group

name and a particular cooperator. This record indicates that a cooperator belongs to a specific cooperator group.

#### MBR-ROLE

This item allows classification of members within a group. It indicates the type of membership a cooperator has within a group. Normally the MBR-ROLE is left blank. Character 10.

#### SITE-RECORD

This record describes the contact information for each germplasm collection site found in the database. These refer to 'sites' within the NPGS. A germplasm collection site is responsible for maintaining a working collection of germplasm and the distribution of that germplasm. Several 'sites' however are only responsible for germplasm information management (i.e. PIO and TSS) but are also referred to as germplasm collection sites. Duplicate SITE-QUERY-NAMES for germplasm collection sites are not allowed.

#### SITE-QUERY-NAME

A six character germplasm collection site code. This code is verified by the computer. Character 6.

#### SITE-DISTRIBUTION-FLAG

A flag to indicate whether or not the germplasm collection fills orders or not. Character 4.

#### SITE-NAME

The formal NPGS germplasm collection site name. Character 40.

#### SITE-ORGANIZATION

This is the complete organizational name of the germplasm collection site. Character 40.

#### SITE-ADDRESS1

First line of the germplasm collection site mailing address. Character 40.

#### SITE-ADDRESS2

Second line of the germplasm collection site mailing address. Character 40.

#### SITE-CITY

City name for the germplasm collection site mailing address. Character 20.

#### SITE-STATE

State name for the germplasm collection site mailing address. Character 20.

#### SITE-ZIP

Zip code for the germplasm collection site mailing address.

Character 10.

SITE-COUNTRY

Country where the germplasm collection site is located. Character 26.

SITE-PHONE

Complete telephone number of the germplasm collection site coordinator's office. Character 12.

SITE-REGION

USDA-National Plant Germplasm System's region in which the germplasm collection site is located (e.g. W-6, NC-7, etc.). Character 6.

SITE-CURATOR-LNAME

Germplasm collection sites curator (or coordinator's) last name. Character 30.

SITE-CURATOR-FNAME

Germplasm collection sites curator (or coordinator's) first name. Character 10.

SITE-LAST-ORDER

Original number of the last GRIN seed order assigned to a supply site. This indicates how many seed orders have been requested from a particular collection site. Integer.



## DESCRIPTOR-AREA DICTIONARY

## RESCROP-RECORD

The purpose of this record is to allow grouping of germplasm into meaningful units that will or have undergone description or evaluation as distinct crop. The grouping is done at the discretion of the germplasm collection site personnel or other individuals that have or will evaluate/describe the crop units.

## RC-QUERY-NAME

The name of the dataset as defined by the individual that loads it into the database. This name is used to select the dataset during queries. Character 20.

## RC-NUMBER

A three digit number that identifies the particular RESCROP-RECORD. Integer.

## RC-RESPONSIBLE-SITE

The germplasm collection site which maintains observations for this particular research crop. Character 6.

## RC-OBS-FLAG

A flag to indicate if there is or is not an OBSERVATION-RECORD for this crop. Character 4.

## RC-COBS-STORAGE-AREA

The specific COMPOSITE-OBSERVATION area (either 1, 2, or 3) where the observations for this research crop are stored. Character 2.

## RC-NUMBER-OF-DESCRIPTORS

The number of descriptors that exist for this particular research crop. Integer.

## RC-LINES-OF-NARRATIVE

Number of lines composing the RC-NARRATIVE. Lines are 60 characters long. Software supplied.

## RC-NARRATIVE

This occurs RESCROP-NARR-COUNT number of times. The purpose of this is to describe, possibly in paragraph fashion, the contents of the RESCROP-RECORD (i.e. who created the set, who to contact for additional information, etc.). Character 60.

## DESCRIPTOR-RECORD

A record that stores one of each item which is a component of a certain RESCROP-RECORD. A group of all the unique descriptors for a given RESCROP-RECORD is called a dataset. This information is retrieved through the RESCROP-DESCRIPTOR-SET based on a unique DESC-QUERY-NAME or DESC-NUMBER.

## DESC-QUERY-NAME

A valid FORTRAN name, used to select this descriptor record while querying. This name acts as a unique key by which the DESCRIPTOR-RECORD is linked to the RESCROP-DESCRIPTOR set. Character 20.

## DESC-NUMBER

A unique number identifying the particular DESCRIPTOR-RECORD. Integer.

## DESC-NAME

This name is used to describe in greater detail the name of the descriptor. Character 60.

## DESC-CAC-APPROVED

A code or flag indicating whether the DESCRIPTOR-RECORD has been approved by the RESCROP-RECORD's Crop Advisory Committee (CAC). Character 2.

## DESC-CATEGORY

An arbitrary category, defined by the dataset originator, used for grouping descriptors of similar nature for use in querying and reporting. Character 12.

## DESC-COBS-ITEMNAME

The COBS-VALUE (1-120) that identifies the position of this DESCRIPTOR-RECORD in the corresponding COMPOSITE-OBS-RECORD. Character 6.

## DESC-OBS-FLAG

A flag used to indicate whether the descriptor applies to OBSERVATION-RECORDs or COMPOSITE-OBS-RECORDs. Character 4.

## DESC-OBS-STORAGE-AREA

Storage area of a particular descriptor of a single observation. Character 6.

## DESC-AVG-CHAR-LENGTH

Average character length of possible descriptor values found in the dataset. Integer.

## DESC-MAX-CHAR-LENGTH

Longest character length descriptor found in the dataset. Integer.

## DESC-LOW-VALUE

The inclusive lower bound of a range by which numeric descriptors are edited with a 'RANGE'. Real.

## DESC-HIGH-VALUE

The inclusive upper bound of a range by which numeric descriptors

are edited with a 'RANGE'. Real.

#### DESC-NUMBER-OF-CODES

The number of CODE-RECORDs stored for this descriptor. It may not be the total number of codes. Storing codes 1,5 and 7 from a range of 1-9 is possible since the other codes are intermediate to the above and need no further clarification. Software supplied.

#### DESC-LINES-OF-DEF

The number of 'lines' (occurrences) of the DESC-DEFINITION stored. Software supplied.

#### DESCRIPTOR-DEFINITION

The definition will occur DESCRIPTOR-DEF-COUNT times. This could be a free form paragraph describing the descriptor in detail. Details are: what specific trait is observed, what units (if any) of measurement are used, what environmental or assay constraints were involved, any clarification of coding that can't be described well (or is not appropriate) in the CODE-RECORDs, etc. Character 60.

#### CODE-RECORD

Stores in the database descriptions of each state that a coded descriptor may assume. The information is retrieved through the DESCRIPTOR-CODE set based on unique code value.

#### CODE-VALUE

One of the alphanumeric code values the descriptor may assume. Character 10.

#### CODE-LINES-OF-DEF

This contains the number of lines (occurrences) of the CODE-DEFINITION that are stored. Software supplied.

#### CODE-DEFINITION

This occurs CODE-LINES-OF-DEF times. It describes the meaning of each CODE-VALUE in detail. Character 60.

## OBSERVATION-AREA DICTIONARY

## DESCSTUDIED-RECORD

This record stores the following information concerning a particular descriptor used in a given study.

## DS-RESPONSIBLE-SITE

The germplasm collection site affiliation of the individual entering or last updating the DS-RECORD and the corresponding OBSERVATION-RECORDS. Character 6.

## DS-DESC-NUMBER

A unique number given a particular descriptor with a research crop. The RC-NUMBER precedes the DS-DESC-NUMBER to create a unique identifier. This is an alternative to using only the DS-DESC-NUMBER. Software supplied.

## DS-ENV-NUMBER

A unique number given to a particular environment within a given study. The SD-NUMBER precedes the ENV-NUMBER to create a unique identifier. Software supplied.

## DS-QUALIFIER-NUMBER

A code used to identify specific qualifiers and subqualifiers for a given descriptor in a given environment. This code is used to retrieve information from the database, because it is not possible to retrieve on the variable length DESCSTUDIED-SUBQUALIFIER. The search must be conducted on this code. Software supplied.

## DS-QUALIFIER

A field that allows additional qualification between descriptors that are similar. This could include resistance to particular strains of a rust pathogen. The type of strain would be included in this field. Character 26.

## DS-LINES-OF-QUALIFIER-COMMENT

Number of lines of DS-QUALIFIER-COMMENT. There is a maximum of 5 DS-LINES-OF-QUALIFIER-COMMENT. Software supplied.

## DS-QUALIFIER-COMMENT

A comment or definition of the qualifier. See the definition for the DESCSTUDIED-QUALIFIER. This field cannot be retrieved because of its variable length. This field occurs DS-LINES-OF-QUALIFIER-COMMENT times. Character 60.

## OBSERVATION-RECORD

This record links the ACCESSION and DESCSTUDIED records. It contains the observed value for a single characteristic/observation in a particular study for a single accession. This is in contrast to the COMPOSITE-OBS-RECORD which contains 120 strongly defined fields for

larger and or more complete studies.

#### OBS-ACC-ID-PREFIX

Prefix to the accession identifier for which the particular OBSERVATION-RECORD refers. Character 4.

#### OBS-ACC-ID-NUMBER

The number portion composing the accession identifier for which the particular OBSERVATION-RECORD refers.

#### OBS-REPLICATE-NUMBER

A number that increments by one each time another OBSERVATION-RECORD is created for the particular ACCESSION-RECORD within the particular research crop and STUDY-ENVIRONMENT-RECORD. The OBS-REPLICATE-NUMBER will usually be 01. Software supplied.

#### OBS-DESC-NUMBER

A unique number given to a particular descriptor within the RESCROP-RECORD. Used for identification. Integer.

#### OBS-ENV-NUMBER

The ENV-NUMBER that identifies the environment within which the OBSERVATION-RECORD results were taken. Integer.

#### OBS-QUALIFIER-NUMBER

A field that is used to identify which DESCSTUDIED-RECORD within the descriptor to which this observation belongs (e.g. a particular race of a pathogen). Integer.

#### OBS-STANDARD-VALUE

The observation value for any code that has been standardized to fit within a defined range other than the range under which it was originally taken. This situation could occur if data was taken with a unique set of descriptors but needed to fit in a pre-defined set. The descriptors and descriptor states are then converted, with the converted code value put in this field. Character 4.

#### OBS-ORIGINAL-VALUE

This field is used to store the original value of a converted descriptor (see the OBS-STD-CODE-VALUE for further clarification). This field only holds numeric data. If the original value is of a character type, this information will be placed in the OBS-COMMENT field. Real.

#### OBS-SAMPLE-ID

The inventory sample identification for the particular accession. This is included so subsets of an original accession may have evaluation records tied to them. Character 60.

#### OBS-COMMENT



A field to store original observation data if this data is in a character format and hence will not fit into the OBS-ORIG-VALUE. This field can also be used to store statistical information on this data (i.e. mean, standard deviations, variances, sample sizes, etc.). If the original data was alphabetic instead of numeric, this information could be stored here. Character 60.

## COMPOSITE-OBSERVATION-AREA DICTIONARY

## COMPOSITE-OBS-RECORD

This record contains the observed values for characteristic/observation data. It differs from the OBSERVATION-RECORD in that it contains 120 rigidly defined fields each of which represents a separate descriptor. The OBSERVATION-RECORD however, contains values for only one descriptor.

## COBS-ACC-ID-PREFIX

The accession primary identifier prefix for the accession.  
Character 4.

## COBS-ACC-ID-NUMBER

The accession primary identifier number for the accession.  
Integer.

## COBS-REPLICATE-NUMBER

A number increased by one each time a new COMPOSITE-OBS record is created for an accession. Software supplied.

## COBS-UPD-SITE

The germplasm collection site of the individual entering or last updating the COMPOSITE-OBS-RECORD. Software supplied.

## COBS-VALUE-001 to COBS-VALUE-015

A block of integer\*2 observations.

## COBS-VALUE-016 to COBS-VALUE-017

A block of integer\*4 observations.

## COBS-VALUE-018 to COBS-VALUE-052

A block of real\*4 observations.

## COBS-VALUE-053 to COBS-VALUE-087

A block of character 2 observations.

## COBS-VALUE-088 to COBS-VALUE-097

A block of character 4 observations.

## COBS-VALUE-098 to COBS-VALUE-107

A block of character 6 observations.

## COBS-VALUE-108 to COBS-VALUE-117

A block of character 10 observations.

## COBS-VALUE-118 to COBS-VALUE-120

A block of variable length character fields.

## COBS-SAMPLE-ID

A field that stores the inventory sample identifier for the accession evaluated. Character 60.

## STUDY-AREA DICTIONARY

## STUDY-RECORD

A record used for storing the specific details of evaluation studies. This information includes location information and researcher information.

## SD-QUERY-NAME

A short name describing the particular study as designated by the researcher in charge. This allows each study to be identified with each observation and is used to retrieve on in the database. Character 20.

## SD-NUMBER

A number assigned to each particular STUDY-RECORD for software and user identification. Software supplied.

## SD-PSCI-LNAME

The last name of the principle investigator of the study. Character 30.

## SD-PSCI-FNAME

The first name of the principle investigator of the study. Character 10.

## SD-EXPERIMENT-TYPE

A field to describe the type of experiment (i.e., field, greenhouse, growth chamber). Character 16.

## SD-YEAR

Year the evaluations were conducted. Character 4.

## SD-RESPONSIBLE-SITE

The germplasm collection site of the individual entering or last updating the STUDY-RECORD. Software supplied.

## SD-NUMBER-OF-ENV

The number of environments under which the study was conducted. Software supplied.

## SD-NUMBER-OF-RESEARCHERS

The number of researchers that conducted the study and are responsible for its results. Software supplied.

## SD-NAME

A name describing the particular study as designated by the researcher in charge. This name affords a better description of the study than that given in the SD-QUERY-NAME field. Character 60.

## SD-COMMENT

Text citing abnormal or additional information concerning the study. Character 60.

## SD-RESEARCHERS

Data on the researcher(s) that conducted the experiment, explained by the following fields. These fields will be used once for each researcher involved with the study. This group of fields (SD-RESEARCHERS) will be repeated SD-NUMBER-OF-RESEARCHERS times.

## SD-RES-LNAME

Last name of the researcher involved. Character 30.

## SD-RES-FNAME

First name of the researcher involved. Character 10.

## SD-RES-ORGANIZATION

Organization to which the researcher belong. Character 40.

## SD-RES-ADDRESS1

First line of the mailing address of the researcher. Character 40.

## SD-RES-ADDRESS2

Second line of the mailing address of the researcher. Character 40.

## SD-RES-CITY

City of the mailing address of the researcher. Character 20.

## SD-RES-STATE

State or province of the mailing address of the researcher. Character 20.

## SD-RES-ZIP

Zip code of the mailing address of the researcher. Character 10.

## SD-RES-COUNTRY

The country of the mailing address of the researcher. Character 26.

## SD-RES-COMMENT

Brief comment for additional information concerning the researchers involved with the study. Character 60.

## ENVIRONMENT-RECORD

This record describes each specific environment (or location) and gives the time the study was conducted.

## ENV-QUERY-NAME



This is a unique, short phrase describing the environment. It is used for record identification. Character 20.

#### ENV-NUMBER

A number assigned to each particular ENVIRONMENT-RECORD for software and user identification. This number refers to a particular environment within a given study. The first four digits composing this identification are the STUDY-NUMBER, the second three are those unique to a particular environment. Software supplied.

#### ENV-EVAL-INSTITUTE

The name of the particular location (i.e. farm name, institute name, etc.) where this environment is located. Character 40.

#### ENV-EVAL-CITY

The city name in which the environment is located. Character 20.

#### ENV-EVAL-STATE

The state or province name in which the environment is located. Character 20.

#### ENV-COUNTRY

Country in which the environment is located. Character 26.

#### ENV-CHIEF-EVALUATOR

The evaluator that was in charge of the study at this particular environment. Character 40.

#### ENV-EXPERIMENT-TYPE

The type of experiment in this environment (i.e. field, greenhouse, growth chamber etc.) Character 16.

#### ENV-EXPERIMENTAL-DESIGN

A description of the statistical experimental design of the study. Character 20.

#### ENV-LOCATION

The specific location within the overall location in which the experiment was conducted (plot number, etc.). Character 12.

#### ENV-LAT-DEG

Latitude degrees for the environment (0-90). Character 2.

#### ENV-LAT-MIN

Latitude minutes for the environment (0-59) Character 2.

#### ENV-LAT-HEMI

Latitude hemisphere for the environment (North or South of 0 latitude) The software will accept N, S, or a blank. Character 2.

## ENV-LONG-DEG

Longitude degrees for the environment (0-179). Character 2.

## ENV-LONG-MIN

Latitude minutes for the environment (0-59). Character 2.

## ENV-LONG-HEMI

Hemisphere for the longitude for the environment (East or West of Greenwich) The software will accept E, W, or a blank. Character 2.

## ENV-ELEVATION-LOW

Elevation of lowest study plot (meters). Integer.

## ENV-ELEVATION-HIGH

Elevation of highest study plot (meters). Integer.

## ENV-HARDI-ZONE

Hardiness zone at which the study was conducted. Character 6.

## ENV-HARDI-ZONE-SOURCE

The citation (source) of the hardiness zone given in ENV-HARDI-ZONE. Character 16.

## ENV-TOPOGRAPHY

A topographical description of the experimental area. Character 12.

## ENV-DRAINAGE

Soil drainage characteristics for the experimental area. Character 10.

## ENV-SCS-CLASS

Soil Conservation Service soil classification of the field soil. Character 6.

## ENV-SOIL-TEXT

The soil texture class (using the percentages of sand, silt, and clay) from a soil texture triangle of the study area. Character 30.

## ENV-PCT-ORGN

Percent organic matter in the environment soil. Integer.

## ENV-PCT-SAND

Percent sand in the environment soil. Integer.

## ENV-PCT-SILT

Percent silt in the environment soil. Integer.

## ENV-PCT-CLAY

Percent clay in the environment soil. Integer.

ENV-SOIL-PH

Soil pH of the study field or greenhouse soil. Real.

ENV-K-PPM

Amount of potassium in the environment soil (ppm). Real.

ENV-P-PPM

Amount of phosphorus in the environment soil (ppm). Real.

ENV-CA-PPM

Amount of calcium in the environment soil (ppm). Real.

ENV-MG-PPM

Amount of magnesium in the environment soil (ppm). Real.

ENV-N-PPM

Amount of nitrogen in the environment soil (ppm). Real.

ENV-SOL-SALT-MMHOS

Amount of soluble salts in the environment soil (micromhos).  
Real.

ENV-MIN-PHOTO-PERIOD

Minimum photoperiod of the environment during the study period.  
Integer.

ENV-MAX-PHOTO-PERIOD

Maximum photoperiod of the environment during the study period.  
Integer.

ENV-MIN-TEMP

The lowest temperature recorded during the study period (degrees  
C). Integer.

ENV-MAX-TEMP

The highest temperature recorded during the study period (degrees  
C). Integer.

ENV-AVG-TEMP

The mean temperature during the study period (found using the mean  
of the mean daily temperatures of each study day, degrees C).  
Integer.

ENV-DEGREE-DAYS

Number of days that the temperature of the environment exceeded  
the ENV-AVG-TEMP. Integer.

ENV-CHILLING-UNITS

Number of hours where the temperature fell between 0-10 C.

Integer.

ENV-SOLAR-RADIATION

Average number of units of radiation (photon flux) (microE/sec/m squared) received per day during the study period. Character 16.

ENV-WIND

Average wind velocity measured during the study period for this environment (m/sec). Integer.

ENV-WATER-TYPE

The type of water application to the experimental area. Character 2.

ENV-TOTAL-RAINFALL

Total rainfall during the study period (mm). Character 8.

ENV-MEAN-DAILY-RAINFALL

Mean daily rainfall that occurred during the study period (mm/day). Character 8.

ENV-IRRIGATION-TYPE

Description of the type of irrigation used during the study. Character 6.

ENV-IRRIGATION-DAYS

The number of days the irrigation was employed. Integer.

ENV-IRRIGATION-TOTAL

Amount of irrigation (in mm) applied to the study. Character 8.

ENV-FERTILIZER-TYPE

Fertilizer chemical composition applied to the study area. Character 6.

ENV-FERTILIZER-AMOUNT

Amount of fertilizer applied to the study area (kg/ha). Character 8.

ENV-YEAR-STARTED

Year that the study was started. Character 4.

ENV-MONTH-STARTED

Month that the study was started. Character 2.

ENV-DAY-STARTED

Day that the study was started. Character 2.

ENV-YEAR-SEEDED

Year that the plants were seeded in the study area. Character 4.

## ENV-MONTH-SEEDED

Month that the plants were seeded in the study area. Character 2.

## ENV-DAY-SEEDED

Day that the plants were seeded in the study area. Character 2.

## ENV-YEAR-PLANTED

Year that the plants were planted in the study area (if not by seed). Character 4.

## ENV-MONTH-PLANTED

Month that the plants were planted in the study area (if not by seed). Character 2.

## ENV-DAY-PLANTED

Day that the plants were planted in the study area (if not by seed). Character 2.

## ENV-YEAR-TRANSPLANTED

Year that the plants were transplanted in the study area (if not seeded or originally planted). Character 4.

## ENV-MONTH-TRANSPLANTED

Month that the plants were transplanted in the study area (if not seeded or originally planted). Character 2.

## ENV-DAY-TRANSPLANTED

Day that the plants were transplanted in the study area (if not seeded or originally planted). Character 2.

## ENV-YEAR-TEST

Year that the plants were tested. Character 4.

## ENV-MONTH-TEST

Month that the plants were tested. Character 2.

## ENV-DAY-TEST

Day that the plants were tested. Character 2.

## ENV-YEAR-ENDED

Year that the study ended or final results taken. Character 4.

## ENV-MONTH-ENDED

Month that the study ended or final results taken. Character 2.

## ENV-DAY-ENDED

Day that the study ended or final results taken. Character 2.

## ENV-LENGTH-OF-TEST

The length of the test period for the study (years, months, and days). Character 12.



## ENV-PEST-PROTECTION-FLAG

A flag to indicate that pest protection was employed. Character 2.

## ENV-PUBLICATIONS-FLAG

A flag to indicate whether there are none, manuscripts, publications, available on the study environment. Software supplied.

## ENV-LINES-OF-COMMENT

The number of comment lines present for this environment. Software supplied.

## ENV-COMMENT

A space for comments relating to the particular study environment. ENV-LINES-OF-COMMENT times. Character 60.

## PUBLICATION-RECORD

This record gives information needed to find each published and otherwise available information related to the particular study.

## PUB-SENIOR-AUTHOR-LNAME

The last name of the senior author of the publication. Character 30.

## PUB-SENIOR-AUTHOR-FNAME

The first name of the senior author of the publication. Character 10.

## PUB-YEAR

The year of publication. Character 4.

## PUB-MONTH

The month of publication. Character 2.

## PUB-JOURNAL-CODE

Abbreviated name for the journal in which the article concerning the study was published. Character 12.

## PUB-LINES-OF-TITLE

Number of 60 character title lines of the article. Software supplied.

## PUB-LINES-OF-ABSTRACT

Number of 60 character lines in the abstract. Software supplied.

## PUB-NUMBER-OF-AUTHORS

The number of authors of the article. Software supplied.

## PUB-JOURNAL-NAME

The complete name of the journal in which the article appears.

Character 60.

#### PUB-JOURNAL-REFERENCE

The volume and page numbers of the citation. The format should be 'volume:page-range(inclusive)'. Character 60.

#### PUB-TITLE

Complete title of the article. This field occurs  
PUB-LINES-OF-TITLE number of times. Character 60.

#### PUB-AUTHORS

Contains the names of all authors of the publications. The  
following fields occur PUB-NUMBER-OF-AUTHORS times.

##### PUB-JUNIOR-AUTHOR-LNAME

Last name of each junior author of the publication.  
Character 30.

##### PUB-JUNIOR-AUTHOR-FNAME

First name of each junior author of the publication.  
Character 10.

#### PUB-ABSTRACT

The individual lines of the abstract. This field occurs  
PUB-LINES-OF-ABSTRACT times. Character 60.

#### GLOSSARY-RECORD

This record contains the keywords that are deemed important by the  
researchers for a study.

##### KEYWORD

Field that holds keywords for the study. Character 30.

#### KEYWORD-RECORD

This record links the keywords found in the GLOSSARY-RECORD, KEYWORD  
field, to publications which may contain the specific keyword, to  
provide a means to retrieve all publications with the same keyword or  
all keywords for a given publication.

##### KEYWORD-SITE

Germplasm collection site affiliation of the individual that  
entered or last updated the KEYWORD-RECORD. Software supplied.

## STANDARDS-AREA DICTIONARY

## GEOGRAPHIC-RECORD

This record stores the geographic names for distribution, origin and source countries. Information within this record is the responsibility of the DBMU, PIO, and TSS.

## GEO-COUNTRY

The country or geographic region. Character 26.

## GEO-STATE

The state or province within a country or region. Character 20.

## GEO-NUMBER

A three digit number unique to a geographic name. This code is useful to PIO and TSS for data entry purposes. Software supplied.

## GEO-COUNTRY-FLAG

This flag indicates whether the name is that of a country or geographic region. Character 2.

## GEO-UPD-SITE

The name of the unit of the individual entering or last updating the GEOGRAPHIC-RECORD. Software supplied.

## GEO-YEAR-UPD

Year that the GEOGRAPHIC-RECORD was entered or last updated. Software supplied.

## GEO-MONTH-UPD

Month the GEOGRAPHIC-RECORD was entered or last updated. Software supplied.

## GEO-DAY-UPD

Day the GEOGRAPHIC-RECORD was entered or last updated. Software supplied.

## GEO-FORMER-NAMES

Former names of the country or state. Character 60.

## DISTRIBUTION-RECORD

This record stores the presence of a species in a geographic region.

## DIST-NUMBER

Unique number for a distribution record of a species. This can be used as a unique identification for the particular distribution. Software supplied.

## DIST-RESPONSIBLE-SITE

Germplasm collection site affiliation of the individual that

entered or last updated the DISTRIBUTION-RECORD. Only PIO and TSS will be able to update the DISTRIBUTION-RECORD. Software supplied.

#### DIST-COMMENT

Appropriate distribution comments. These comments may include information concerning a species within a country or region. Character 60.

#### COMMON-NAME-RECORD

Record that contains common names that will be linked to individual accessions as well as the SPECIES-RECORD.

#### CN-CODE

Code used for identification of the common name. In XXXXXX.XXX format. Software supplied.

#### CN-NAME

The common name. Character 30.

#### CN-SOURCE

Reference source for the common name. This could be a literature citation or an individual. Character 20.

#### CN-RESPONSIBLE-UPD-SITE

Collection site code for individual that entered or last changed the COMMON-NAME-RECORD. This collection site is then responsible for this record. Software supplied.

## GERMINATION-RULES-AREA DICTIONARY

## GERMRULE-RECORD

Record that stores germination rules and requirements for a species.

## GU-QUERY-NAME

A phrase for describing the specific GERMRULE-RECORD. This is a unique phrase for each record. Character 30.

## GU-NUMBER

A unique number assigned to each GERMRULE-RECORD for software identification and query purposes. Software supplied.

## GU-CNAME

The common name of the species or group of taxa that follow the rules stored in this GERMRULE-RECORD. Character 30.

## GU-SUBSTRATA

The substrata (or media) used for germination testing. This is a coded field. Character 2.

## GU-TEMP-C

The temperature (in degrees C) used for germination testing of this particular group. Character 12.

## GU-COUNTDAYS

The number of days for this group before seed is examined for germination results. Character 20.

## GU-RESPONSIBLE-SITE

The germplasm collection site of the individual entering or last updating the secondary identifier. Character 6.

## GU-YEAR-UPD

Year that the GERMRULE-RECORD was entered or last updated. Software supplied.

## GU-MONTH-UPD

Month the GERMRULE-RECORD was entered or last updated. Software supplied.

## GU-DAY-UPD

Day the GERMRULE-RECORD was entered or last updated. Software supplied.

## GU-LINES-OF-SPEC

The number of lines of germination specific requirements for this GERMRULES-RECORD. There are 60 characters per line. Integer.

## GU-LINES-OF-AD

The number of lines of additional germination directions needed



for the tested seed. Integer.

#### GU-SPEC

The specific requirements for germination for this record. The following statement occurs GR-LINES-OF-SPEC number of times.

#### GU-AD

The additional germination directions needed for the tested seed. The following statement occurs GRULE-AD-COUNT number of times.

#### GU-AUTHORITY-RECORD

A record used for linking together a particular SPECIES-RECORD with the appropriate GERMRule-RECORD.

#### GUAU-AUTHORITY

A reference for the appropriate germination rule for a given species. This is necessary if there are multiple germination rules for a species. Authorities may be the American Official Seed Association (AOSA), the International Seed Testing Association (ISTA) or rules developed by the NSSL. Character 6.

#### GUAU-OPTION

The authority followed for germination rules for the particular species. Either the AOSA, ISTA, or the NSSL. Character 4.

## TAXONOMY-AREA DICTIONARY

## GENUS-RECORD

Record that contains the genus and family names. Maintained by the TSS.

## GENUS-NAME

Current name for a genus. Character 24.

## GENUS-HYBRID-CODE

Flag to indicate that the genus name represents a hybrid of two or more genera. The genus name will also contain an 'X'. Character 2.

## GENUS-FAMILY-NAME

Currently accepted family name for a genus. Character 22.

## GENUS-ALT-FAMILY-NAME

Accepted alternate family name(s). Character 36.

## GENUS-AUTHORITY

The nomenclature author for a genus. Character 60.

## GENUS-RESPONSIBLE-SITE

The unit name affiliation of the individual responsible for maintaining this GENUS-RECORD and all the nomenclature records associated with it. Character 6.

## GENUS-UPD-LOGON

The logon ID of the individual entering or last updating the GENUS-RECORD. Software supplied.

## GENUS-YEAR-UPD

Year that the GENUS-RECORD was entered or last updated. Software supplied.

## GENUS-MONTH-UPD

Month the GENUS-RECORD was entered or last updated. Software supplied.

## GENUS-DAY-UPD

Day the GENUS-RECORD was entered or last updated. Software supplied.

## GENUS-COMMENT

Comment concerning the given GENUS-NAME. Character 60.

## SPECIES-RECORD

Record containing species and infraspecific taxonomic information.

## SPECIES-NAME

Current name for the species. Character 26.

## SPECIES-SUBTAXA-NAME

Current last infraspecific epithet. Character 26.

## SPECIES-SUBTAXA-RANK

Current rank of the last infraspecific epithet. Character 8.

## SPECIES-NOMEN-NUMBER

A six digit number code unique to a given record. This is assigned by the computer. Integer.

## SPECIES-PRIMARY-SUPPLY-SITE

The collection site for the taxon. Character 6.

## SPECIES-RESTRICTED

A flag to indicate if the species is considered noxious, poisonous, or otherwise detrimental. Character 4.

## SPECIES-HYBRID-CODE

A flag to indicate a specific hybrid. The species name will also contain a 'X'. Character 2.

## SPECIES-USDA-INTRODUCED-CODE

Field to indicate if this is a foreign species introduced to the United States by the USDA. Character 4.

## SPECIES-TSS-VERIFIED

Initials of TSS personnel that verified the taxon listed. Character 4.

## SPECIES-UPD-LOGON

The logon ID of the individual entering or last updating the SPECIES-RECORD. Software supplied.

## SPECIES-YEAR-UPD

Year that the SPECIES-RECORD was entered or last updated. Software supplied.

## SPECIES-MONTH-UPD

Month the SPECIES-RECORD was entered or last updated. Software supplied.

## SPECIES-DAY-UPD

Day the SPECIES-RECORD was entered or last updated. Software supplied.

## SPECIES-AUTHORITY

The nomenclatural authority of this species. Character 60.

## SPECIES-SUBTAXA-AUTHORITY

The nomenclatural authority of the last infraspecific epithet.  
Character 60.

## SPECIES-MIDTAXA

Any scientific names and authorities between the species and the last epithet. Character 60.

## SPECIES-PROTOLOG-LINE1

First line of the citation for the original description of the infraspecific name description. Character 60.

## SPECIES-PROTOLOG-LINE2

Second line of the citation. Character 60.

## SPECIES-COMMENT

Field for nomenclatural comments on the scientific name.  
Character 60.

## TAXSYN-RECORD

Record containing the taxonomic synonym.

## TAXSYN-NOMEN-NUMBER

A number for the TAXSYN-RECORD for unique identification.  
Integer.

## TAXSYN-GENUS

Genus name in the synonym record. Character 24.

## TAXSYN-SPECIES

Species name in the synonym record. Character 26.

## TAXSYN-SUBTAXA-NAME

The last epithet of the trinomial (synonym trinomial). Character 26.

## TAXSYN-SUBTAXA-RANK

The rank of the last epithet. Character 8.

## TAXSYN-CODE

A code indicating that the name is a basionym or synonym of the currently accepted taxonomic name. Character 2.

## TAXSYN-GENUS-HYBRID-CODE

A flag indicating that the name is a generic hybrid. Character 2.

## TAXSYN-SPEC-HYBRID-CODE

A flag indicating the name is a species hybrid. Character 2.

## TAXSYN-NOMEN-NUDUM

A flag indicating the name is a nomen nudum (i.e. a name without

a valid description). Character 2.

#### TAXSYN-NOMEN-ILLEGIT

Flag indicating the name is a nomen illegit (i.e., an illegal name applied to a species). Character 2.

#### TAXSYN-NOMEN-DUBIA

Flag indicating a dubious name. Character 2.

#### TAXSYN-RESPONSIBLE-UPD-SITE

The unit name or germplasm collection site of the individual entering or last updating the TAXSYN-RECORD. Character 6.

#### TAXSYN-UPD-LOGON

The logon ID of the individual entering or last updating the TAXSYN-RECORD. Software supplied.

#### TAXSYN-YEAR-UPD

Year the the TAXSYN-RECORD was entered or last updated. Software supplied.

#### TAXSYN-MONTH-UPD

Month the TAXSYN-RECORD was entered or last updated. Software supplied.

#### TAXSYN-DAY-UPD

Day the TAXSYN-RECORD was entered or last updated. Software supplied.

#### TAXSYN-GENUS-AUTHORITY

Generic authority for the synonym. Character 60.

#### TAXSYN-SPECIES-AUTHORITY

Specific authority for the synonym. Character 60.

#### TAXSYN-SUBTAXA-AUTHORITY

Authority of last epithet in a trinomial. Character 60.

#### TAXSYN-MIDTAXA

Any names, ranks, and authorities of any levels between the species and the last epithet. Character 60.

#### TAXSYN-PROTOLOG1

First line for the protolog for the synonym. Character 60.

#### TAXSYN-PROTOLOG2

Second line for the protolog for the synonym. Character 60.

#### TAXSYN-COMMENT

Taxonomic comments on the synonym. Character 60.

## TAXLIT-RECORD

Record containing the full name of the current taxonomic references (floras, monographs, etc.).

## TAXLIT-ABBREV

An abbreviation for the taxonomic reference. Character 10.

## TAXLIT-RESPONSIBLE-UPD-SITE

The unit name or germplasm collection site of the individual entering or last updating the TAXLIT-RECORD. Software supplied.

## TAXLIT-FULL-LINE1

First line of the full title of the reference. Character 60.

## TAXLIT-FULL-LINE2

Second line of the full title of the reference. Character 60.

## TAXLIT-AUTHOR

First author of the reference. Character 60.

## SP-CITATION-RECORD

Citation of a current species in the taxonomic reference (not protolog).

## SPCIT-NUMBER

A number code used to identify a particular reference. Software supplied.

## SPCIT-VOL-PG

The volume number and page numbers of the citation (the volume should be listed first, separated from the page (start:end) range by a colon (:)). Character 16.

## SPCIT-UPD-LOGON

The logon ID of the individual entering or last updating the SP-CITATION-RECORD. Software supplied.

## SPCIT-YEAR-UPD

Year the SP-CITATION-RECORD was entered or last updated. Software supplied.

## SPCIT-MONTH-UPD

Month the SP-CITATION-RECORD was entered or last updated. Software supplied.

## SPCIT-DAY-UPD

Day the SP-CITATION-RECORD was entered or last updated. Software supplied.

## SPCIT-COMMENT

Comment concerning the occurrence of a species in a particular



reference. Character 60.

#### SYN-CITATION-RECORD

Reference citation for names used as synonyms.

##### SYNCIT-NUMBER

A number used to identify a particular reference. Software supplied.

##### SYNCIT-VOL-PG

The volume and page number of the coded citation (volume number precedes the inclusive page number range which are separated by a colon (:)). Character 16.

##### SYNCIT-UPD-LOGON

The logon ID of the individual entering or last updating the SYN-CITATION-RECORD. Software supplied.

##### SYNCIT-YEAR-UPD

Year the SYN-CITATION-RECORD was entered or last updated. Software supplied.

##### SYNCIT-MONTH-UPD

Month the SYN-CITATION-RECORD was entered or last updated. Software supplied.

##### SYNCIT-DAY-UPD

Day the SYN-CITATION-RECORD was entered or last updated. Software supplied.

##### SYNCIT-COMMENT

Comment on the occurrence of the synonym in a particular reference. Character 60.

## ORDERS-AREA DICTIONARY

## ORDER-RECORD

Record for storing information concerning germplasm sample orders. These orders can be made only to the germplasm repository holding material for distribution. If the availability flag in the INVENTORY-RECORD (INV-AVAIL-FLAG) indicates the sample is available for distribution, then orders may be placed to the site maintaining the germplasm for distribution.

## ORDER-SITE

The code of the germplasm collection site which receives and fills orders. Character 6.

## ORDER-STATUS

Status of the order at the date on the computer (codes used are: NEW, OPEN, REVIEW, SPLIT, FORWRD, FILLED, CANCEL, HELD). Character 6.

## ORDER-NUMBER

Germplasm order number assigned automatically by the computer when submitting the germplasm order. Integer.

## ORDER-TYPE

The type of order desired (i.e. distribution (DI), transfer (TR), increase (RE), etc.) Character 2.

## ORDER-YEAR-DUE

Year the filled order is due. Character 2.

## ORDER-MONTH-DUE

Month the filled order is due. Character 2.

## ORDER-DAY-DUE

Day the filled order is due. Character 2.

## ORDER-LNAME

The requestor's last name. Character 30.

## ORDER-FNAME

The requestor's first name. Character 10.

## ORDER-ORGANIZATION

The organizational name with which the requestor is associated. Character 40.

## ORDER-ADDRESS1

First line of the requestor's mailing address. Character 40.

## ORDER-ADDRESS2

Second line of the requestor's mailing address. Character 40.

ORDER-CITY

City in which the above mailing address is located. Character 20.

ORDER-STATE

State or province in which the above mailing address is located. Character 20.

ORDER-ZIP

Nine digit zip code of the above mailing address. Character 10.

ORDER-COUNTRY

Country in which the above mailing address is located. Character 26.

ORDER-PHONE

Telephone number of the person placing the order. Character 12.

ORDER-REQUESTOR-REFERENCE

Invoice number or other information providing a cross-reference between the GRIN order number (ORDER-NUMBER, as above) and the requestor's data. Character 10.

ORDER-ACCESSION-COUNT

Number of accessions ordered. Integer.

ORDER-ACCESSION-SHIPED

Number (out of the total requested) that were shipped to the requestor. Integer.

ORDER-ACCESSION-SPLIT

Number of accessions split from original order for additional processing. Integer.

ORDER-YEAR-SHIPED

Year that the order was shipped. Character 2.

ORDER-MONTH-SHIPED

Month that the order was shipped. Character 2.

ORDER-DAY-SHIPED

Day that the order was shipped. Character 2.

ORDER-UPD-LOGON

Logon ID of the individual entering or last updating the ORDER-RECORD. Software supplied.

ORDER-YEAR-UPD

Year that the ORDER-RECORD was entered. Software supplied.

## ORDER-MONTH-UPD

Month the ORDER-RECORD was entered. Software supplied.

## ORDER-DAY-UPD

Day the ORDER-RECORD was entered. Software supplied.

## ORDER-LINES-OF-TEXT

Number of 60 character lines in the order. Software supplied.

## ORDER-ORIGINAL-REQUESTOR-NAME

The last and first name of the original requestor of the germplasm sample. Character 60.

## ORDER-ORIGINAL-REQUESTOR-ORG

Organization affiliation of the original requestor. Character 60.

## ORDER-ORIGINAL-REQUESTOR-ADD1

First line of the address of the original requestor. Character 60.

## ORDER-ORIGINAL-REQUESTOR-ADD2

Second line of the address of the original requestor.

## ORDER-ORIGINAL-REQUESTOR-CITY

The city name to which the requestor's address is located. Character 60.

## ORDER-ORIGINAL-REQUESTOR-STAT

The state name in which the requestor's address is located. Character 60.

## ORDER-ORIGINAL-REQUESTOR-ZIP

The zip code of the original requestor. Character 60.

## ORDER-ORIGINAL-REQUESTOR-CTRY

The country name in which the requestor's address is located.

## ORDER-ORIGINAL-REQUESTOR-PHON

The telephone number of the original requestor. Character 60.

## ORDER-TEXT

Order text entered automatically by a public requestor when submitting an order. This field will occur ORDER-LINES-OF-TEXT times. Character 60.

## ORDER-CURATOR-COMMENT

Any comments made by the curator relative to the individual order. Character 60.

## ORDER-ITEM-RECORD

A record that stores the exact contents of the order.

#### OI-ACC-ID-PREFIX

Prefix of the accession primary identifier assigned by the PIO or the germplasm collection site. Character 4.

#### OI-ACC-ID-NUMBER

Number part of the accession primary identifier assigned by the PIO or the germplasm collection site. Integer.

#### OI-SAMPLE-PREFIX

Sample identification prefix. These characters refer to an inventory number prefix that the germplasm collection site assigns to the sample. This is usually the collection site code (NSSL, W-6, AI-7, etc.) but could be another collection site assigned code. Character 4.

#### OI-SAMPLE-NUMBER

Sample identification number. This number refers to an inventory number that the germplasm collection site assigns to the sample. It may or may not be the accession primary identification number. Integer.

#### OI-SAMPLE-SUFFIX

Sample identification suffix. These characters refer to an inventory number suffix that the germplasm collection site assigns to subsequent generations of a sample. Character 4.

#### OI-SAMPLE-TYPE

This is the last element of the inventory identifier. It contains a germplasm type (form, or stock status) code (i.e., S=seed, PL=plant, etc.).

#### OI-SUPPLY-SITE

Germplasm maintenance site responsible for maintenance and distribution of the sample. Character 6.

#### OI-COMMENT

Short comment describing specific accession/inventory information about an order item. Character 16.

#### OI-MEASMENT-UNIT-ORDERED

The measurement unit used for the requested accession (sample). Character 2.

#### OI-QTY-ORDERED

The quantity of material ordered in OI-MEASMENT-UNIT-ORDERED units. Real.

#### OI-MEASMT-UNIT-SHIPED

The units of the quantity of material shipped in

OI-MEASMENT-UNIT-SHIPPED units.

OI-QTY-SHIPPED

The quantity of the accession shipped. The units can be normal measurement units used at the germplasm collection site (i.e. scoops, grams, ounces, etc.) Integer.

OI-NUMBER

Sequential number assigned to every order item (accession/sample) for software identification and faster access. Software supplied.

OI-GENUS

Genus name of the accession ordered. Character 24.

OI-SPECIES

Species name of the accession ordered. Character 26.

OI-SUBTAXA-RANK

Subtaxa rank of the accession nomenclature ordered. Character 60.

OI-SUBTAXA

Subtaxa of the accession ordered.

OI-CULTIVAR

The cultivar name (given in ACC-CULTIVAR field, ACCESSION-RECORD, ACCESSION-AREA).

OI-COUNTRY-OF-ORIGIN

The country of origin of the accession ordered (given in the GEO-COUNTRY field, GEO-RECORD). Character 60.

OI-STATE-OF-ORIGIN

The state of province within the OI-COUNTRY-OF-ORIGIN of the accession ordered. Character 60.

OI-COUNTRY-OF-ACQ

The country of acquisition of the accession ordered as stored in the RANGE-RECORD, R-COUNTRY-OF-ACQ field). Character 60.

OI-STATE-OF-ACQ

The state or province within the OI-COUNTRY-OF-ACQ (as given in the RANGE-RECORD, R-STATE-OF-ACQ field). Character 60.

ITEM-SHIPPED-RECORD

The purpose of this record is to keep track of inventory shipped, who ordered the inventory, and the location to which the inventory was shipped.

IS-MEASMT-UNIT-SHIPPED

The measurement unit used for the shipping of the samples (e.g. ct=count, gm=grams, pkt=packets). Character 2.



**IS-QTY-SHIPPED**

The quantity (using units given in the IS-MEASMT-UNIT-SHIPPED field) of each sample shipped. Integer.

## INVENTORY-AREA DICTIONARY

## INVENTORY-RECORD

Record containing information on spatial locations, physical requirements on seed germination, germination testing, accession supplier, and other information useful to germplasm collection site personnel and daily germplasm management. Items in this area are CALCulated on the combination of INV-SAMPLE-NUMBER, INV-SAMPLE-PREFIX, INV-SAMPLE-SUFFIX, and INV-SAMPLE-TYPE. Duplicates of this identifier are not allowed.

## INV-ACC-ID-PREFIX

Accession identification prefix assigned by the PIO or the germplasm collection site. Character 4.

## INV-ACCID-NUMBER

Accession number assigned by the PIO or the germplasm collection site. Integer.

## INV-SAMPLE-PREFIX

Sample identifier prefix given by the germplasm collection site for the internal management of germplasm samples. Character 4.

## INV-SAMPLE-NUMBER

Unique sample identifier given by the germplasm collection site for the internal site management of the germplasm. Integer.

## INV-SAMPLE-SUFFIX

Sample identifier suffix given by the germplasm collection site for the internal site management of the germplasm. Character 4.

## INV-SAMPLE-TYPE

The last element of the inventory identifier. It contains a germplasm type code (PL=plant, S=seed, CT=cutting, RH=rhizome, RT=root, PO=pollen, CE=cell, TI=tissue culture, etc.) Character 2.

## INV-AVAIL-FLAG

Flag indicating whether the accession is available for distribution. YES or NO are the responses. Character 4.

## INV-REASON-NOTAVAIL

Coded reason for non-availability if INV-AVAIL-FLAG is set to NO. Character 4.

## INV-YEAR-RECEIVED

Year the inventory sample was established at the germplasm collection site. Character 2.

## INV-MONTH-RECEIVED

Month the inventory sample was established at the germplasm collection site. Character 2.

#### INV-DAY-RECEIVED

Day the inventory sample was established at the germplasm collection site. Character 2.

#### INV-YEAR-RELEASED

Year of release of the inventory sample for distribution to the general public. Character 2.

#### INV-MONTH-RELEASED

Month of release of the inventory sample for distribution to the general public. Character 2.

#### INV-DAY-RELEASED

Day of release of the inventory sample for distribution to the general public. Character 2.

#### INV-YEAR-PLANTED

Year that the inventory sample was planted for increase. Character 4.

#### INV-MONTH-PLANTED

Month that the inventory sample was planted for increase. Character 2.

#### INV-DAY-PLANTED

Day that the inventory sample was planted for increase. Character 2.

#### INV-YEAR-HARVESTED

Year that the increased sample was harvested. Character 4.

#### INV-MONTH-HARVESTED

Month that the increased sample was harvested. Character 2.

#### INV-DAY-HARVESTED

Day that the increased sample was harvested. Character 2.

#### INV-STATUS

Viability or status of the germplasm (e.g. dead, virus infected, being propagated, under quarantine). Character 4.

#### INV-POLLINATION-CODE

A code designating the pollination method (i.e. self, cross, caged, self-incompatible, etc.). Character 4.

#### INV-MAINTENANCE-TECHNIQUE

Code given to the type of maintenance needed to maintain the accession. (CT=(count) automatic inventory update, FL (flag)

manual inventory update). Character 2.

INV-HUNDRED-SEED-WEIGHT

Weight of 100 seeds of the inventory sample. Real.

INV-CRITICAL-REPLENISHMENT

The amount of seed (units variable) in storage at which point the inventory sample should be regenerated. Real.

INV-CRITICAL-DISTRIBUTION

The amount of seed (units variable) before which the inventory sample may still be distributed. Real.

INV-CRITICAL-GERMINATION

The lowest germination level above which storage of the inventory sample is not considered harmful. Integer.

INV-MEASMT-UNIT

Units of measure by which inventory is maintained (CT=count, GM=grams, PK=packets, BK=bulk). Character 2.

INV-QTY-SHIP

Default standard (e.g. 250 seed, 1 packet) by which orders are filled. Integer.

INV-REPLENISH-DUE-FLAG

Flag indicating the need for replenishment of the germplasm. Codes are 'YS' and 'NO'. Character 2.

INV-RESPONSIBLE-SITE

Germplasm collection site affiliation of the personnel that entered or last updated the INVENTORY-RECORD. Software supplied.

INV-UPD-LOGON

Logon ID of the individual that entered or last updated the INVENTORY-RECORD. Software supplied.

INV-YEAR-UPD

Year the INVENTORY-RECORD was entered or last updated. Software supplied.

INV-MONTH-UPD

Month the INVENTORY-RECORD was entered or last updated. Software supplied.

INV-DAY-UPD

Day that INVENTORY-RECORD was entered or last updated. Software supplied.

INV-PARENT-OR-MISC

The inventory identifier of the parent of the inventory sample or

miscellaneous comments about its parentage. Character 60.

#### INV-ON-HAND

Total quantity of the inventory sample on hand (in INV-MEASMT-UNIT units) at the germplasm collection site. Integer.

#### INV-LOCATION

Major location of the inventory sample (e.g. field, greenhouse, screenhouse, cold room, etc.) Character 4.

#### INV-SUB-LOCATION1

A location within the INV-LOCATION where the sample is located (i.e. row, shelf number, etc.). Character 4.

#### INV-SUB-LOCATION2

A location within the INV-LOCATION1 where the sample is located (tray, position in the row, etc.). Character 4.

#### INV-COMMENT

Comment concerning any aspect of the inventory. Character 60.

### GERMRESULTS-RECORD

A record for storing information concerning results of germination tests for the accession.

#### GR-GERMINATION-ID

The germination results record identifier (I=initial (original), P=previous, etc.). Character 2.

#### GR-YEAR-GERMINATION

Year the accession was last tested for germination results. Character 4.

#### GR-MONTH-GERMINATION

Month the accession was last tested for germination results. Character 2.

#### GR-DAY-GERMINATION

Day the accession was last tested for germination results. Character 2.

#### GR-PCT-NORMAL-SEEDLING

Percent of seeds tested with well developed seedlings. Integer.

#### GR-PCT-HARD-SEED

Percent of seeds tested with hard seed coats that failed to germinate. Integer.

#### GR-PCT-ABNORMAL-SEEDLING

Percent of the seeds tested that produced abnormal seedlings. Integer.

## GR-PCT-GERMINATION

Percent of seeds tested that germinated (or total germination).  
Integer.

## GR-GRULE-NUMBER

A unique number given to each GERMRESULTS-RECORD for software  
identification and query purposes. Software supplied.

## GR-UPD-SITE

Identification code of the individual's germplasm collection site  
that entered or last updated the GERMRESULTS-RECORD. Software  
supplied.

## GR-COMMENT

Comments on germination results. Character 60.

## INVGROUP-RECORD

This record represents the site grouping of inventory records in the  
database. These groups are collections of inventory samples as defined  
by the germplasm collection site data manager (or curator).

## IG-NAME

The name of the inventory group assigned by the group manager.  
Character 20.

## IG-RESPONSIBLE-SITE

The germplasm collection site affiliation of the individual that  
entered or last updated the INVGROU-RECORD. Character 6.

## IG-COMMENT

Comment concerning the inventory groups. Character 60.

## INVGROUP-MEMBER-RECORD

Record that provides a 'link' between an INVENTORY-GROUP-RECORD and its  
inventory sample record members.

## IGM-COMMENT

Identification for each INVGROU-MEMBER-RECORD not being used at  
the present time. Character 60.

## SUPPLIER-RECORD

A record used to maintain suppliers of all germplasm accessions with  
listing in an inventory area.

## SUP-ROLE

The role of the germplasm supplier. Character 4.

## SUP-NAME

The name of the supplier of the germplasm. Character 60.

## SITE-CROP-RECORD



Record containing information that is useful in 'grouping' inventory records for distribution, replenishment, inventory maintenance, and control.

SC-QUERY-NAME

A name assigned at the germplasm maintenance site to the SITE-CROP-RECORD describing its contents. Character 20.

SC-CRITICAL-REPLENISHMENT

Number of units of germplasm above which replenishment is not needed. Real.

SC-CRITICAL-DISTRIBUTION

Number of units of germplasm above which distribution can be carried out. Real.

SC-CRITICAL-RETEST-INTERVAL

Time interval between necessary germination tests for the crop (units are years or months). Integer.

SC-CRITICAL-GERMINATION

The percentage germination of the crop below which attention should be drawn to the crop. Integer.

SC-MEASUREMENT-UNIT

The units of germplasm by which orders are filled (packets, number of seeds, grams, etc.). Character 2.

SC-SHIP-QTY

Number of units of the crop normally shipped (e.g. 250 seed, 1 packet). Real.

SC-RESPONSIBLE-SITE

Germplasm collection site of the individual that entered or last updated the SITECROP-RECORD. Character 6.

## SORT-SETS DICTIONARY

## AREAS

These are defined as groups of related records by the information they contain.

## SETS

These are defined relationships between records. These are used to maintain database pointers and references.

## RECORDS

These are collections of related data fields.

## FIELDS

These are smallest unit of data such as an observation value, a name, or a code. Fields are equivalent to an 'item' in INFO.

## OWNER-MEMBER-SET

This is a structure that links an owner record occurrence to one or more member records occurrences. The member records may be in a sorted or unsorted order. In the GRIN data model, the arrows represent sets. The arrows point from the owner record to its member records. The records at the top of the model are owned by the system through sort-sets.

## SORT-SETS or SYSTEM-OWNED-SETS

These have an index (key) containing pointers to all occurrences. These sets provide reasonably fast access to records when all or part of the value for the indexed field(s) is given. The sort-sets are represented by pentagon structure in the GRIN data model. In order to avoid an 'area walk' (or a long query), the query should be written to include at least the first sort (search) key. All sort (search) keys may be used in the query, but the order they are used should be as given for each SORT-SET definition. All the sort (search) keys are given in the respective SORT-SET definitions.

## SORT SETS

## ACCGROUP-SORT-SET

This sort set provides fast/direct access to the ACCGROUP-RECORD through the AG-NAME field.

## CN-SORT-SET

This sort set provides fast/direct access to the COMMON-NAME-RECORD through the CN-NAME field or CN-CODE.

## COPGROUP-SORT-SET

This sort set provides fast/direct access to the COPGROUP-RECORD through the CG-NAME field.

## COOPERATOR-SORT-SET

This sort set provides fast/direct access to the COOPERATOR-RECORD through the COOP-LNAME, COOP-FNAME, COOP-SITE, and COOP-ID fields.

## DESCRIPTOR-SORT-SET

This sort set provides fast/direct access to the DESCRIPTOR-RECORD through the DESC-NUMBER field.

## DESCSTUDIED-SORT-SET

This sort set provides fast/direct access to the DESCSTUDIED-RECORD through the DS-DESC-NUMBER, DS-ENV-NUMBER, AND DS-QUALIFIER-NUMBER fields.

## ENV-SORT-SET

This sort set provides fast/direct access to the ENVIRONMENT-RECORD through the ENV-NUMBER field.

## GENUS-SORT-SET

This sort set provides fast/direct access to the GENUS-RECORD through the GENUS-NAME field.

## GEO-SORT-SET

This sort set provides fast/direct access to the GEOGRAPHIC-RECORD through the GEO-COUNTRY, GEO-STATE, and GEO-NUMBER fields.

## GERMRULES-SORT-SET

This sort set provides fast/direct access to the GERMRULES-RECORD through the GRULE-NUMBER or GU-QUERY-NAME fields.

## GLOSSARY-SORT-SET

This sort set provides fast/direct access to the GLOSSARY-RECORD through the KEYWORD field.

## INVGROUP-SORT-SET

This sort set provides fast/direct access to the INVGROU-RECORD through the IG-NAME and IG-RESPONSIBLE-SITE fields.

## NOMEN-SORT-SET

This sort set provides fast/direct access to the SPECIES-RECORD through the SPECIES-NOMEN-NUMBER field.

## ORDER-SORT-SET

This sort set provides fast/direct access to the ORDER-RECORD through the ORDER-SITE and ORDER-NUMBER fields.

## PUB-SORT-SET

This sort set provides fast/direct access to the PUBLICATION-RECORD through the PUB-SENIOR-AUTHOR-LNAME, PUB-YEAR, and PUB-MONTH fields.

## RANGE-SORT-SET

This sort set provides fast/direct access to the RANGE-RECORD through the R-ID-PREFIX, R-LOW-ID-NUMBER field or R-COUNTRY-OF-ACQ and R-STATE-OF-ACQ fields.

## RESCROP-SORT-SET

This sort set provides fast/direct access to the RESCROP-RECORD through the RC-QUERY-NAME or RC-NUMBER fields.

## SITE-SORT-SET

This sort set provides fast/direct access to the SITE-RECORD through the SITE-QUERY-NAME field.

## SITECROP-SORT-SET

This sort set provides fast/direct access to the SITECROP-RECORD through the SC-QUERY-NAME and SC-UPD-SITE fields.

## STUDY-SORT-SET

This sort set provides fast/direct access to the STUDY-RECORD through the SD-QUERY-NAME or SD-NUMBER fields.

## TAXLIT-SORT-SET

This sort set provides fast/direct access to the TAXLIT-RECORD through the TAXLIT-ABBREV field.

## TAXSYN-SORT-SET

This sort set provides fast/direct access to the TAXSYN-RECORD through the TAXSYN-GENUS and TAXSYN-SPECIES or TAXSYN-NOMEN-NUMBER fields.

## GENERAL TERMS DICTIONARY

## ASCII

American Standard Code for Information Interchange. It is a standard 7-bit code for data communications. The Prime computer uses this code.

## BIT

Binary digit. A digit in the binary numeration system, either a '1' (1-bit) or a '0' (0-bit).

## BYTE

A standard length binary string that is the smallest unit of access in many computers, typically eight bits in length.

## CAC

Crop Advisory Committee. These committees were formed concurrently with GRIN to establish and update policy concerning specific aspects of crop species. They are of interest to GRIN users because they establish and update some descriptor lists for use in the database.

## CALC

A way in which a record can be found very quickly. A record located in storage by an algorithm applied to its key.

## CHARACTER

Generally means a field into which any ASCII character code can be placed without error occurring.

## COBOL

Common Business-Oriented Language. A high level programming language widely used in commerce and industry. A variable name in COBOL may not exceed 32 characters in length.

## COLLECTION SITE

Any of the NPGS units designated to maintain and store plant germplasm. Here, these sites include those that participate in germplasm information handling also (e.g. PIO and TSS).

## FLAG

An indicator that shows the existence of a certain condition when 'set' and the absence of the condition when 'clear.'

## FORTRAN

Formula TRANslation. A high level programming language designed for scientific and mathematical applications. A variable name in FORTRAN may not exceed 6 characters in length. However, Prime implementation of the 1977 ANSI standard allows for variable names up to 32 characters in length.

**HISTORICAL**

Data that is no longer valid through check with a constantly updated standard. This data may still be maintained even though it is no longer formally accepted.

**INTEGER**

A data item that can contain only numbers (Characters 0-9). Also, a whole number, without a fractional part.

**INTEGER\*2**

A data item whose value may not exceed  $\pm 32,767$ .

**INTEGER\*4**

A data item whose value may not exceed  $\pm 2,147,483,647$ .

**KEY**

A value that identifies a record and is used to locate it in storage.

**LINK**

To use pointers or a table to establish access paths between records of one file and records of another file.

**NON-HISTORICAL**

Data that is considered current. This is established through a standard.

**QUERY**

An enquiry. Also, to request a programmed search. A fast search program that produces a selected output interactively (GRIN).

**REAL**

A term indicating that numeric values are represented by decimal digits, a decimal point (possibly assumed) and optionally, a sign (+ or -).

**SCHEMA**

A description of the overall logical structure of a database. This includes all of the realms, set occurrences, record occurrences, and associated data items and data aggregates as they exist in the database.

**SHELL**

A set of user oriented customized programs responsible for data security, user menus, and overall control over application software.

**SUBSCHEMA**

A subset of a schema that specifies those facilities of a database that is accessible with a particular utility (DISCOVER) application program or group of programs.



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